

REMARKS

Claims 10, 11 and 18 currently appear in this application. The Office Action of June 26, 2007, has been carefully studied. These claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicant respectfully requests favorable reconsideration, entry of the present amendment, and formal allowance of the claims.

Amendments

The present amendment further limits the styryl dye in claim 10 to one which does "not substantially absorb visible light with a wavelength of over 600 nm and has an absorption maximum at a wavelength of 400 nm or shorter." Support for this amendment can be found in the specification as filed at page 3, lines 13-20; page 10, lines 10-11; and page 41, lines 21-22.

Art Rejections

Claims 10, 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 60-083982 in view of Chapman, US 6,582,881, Matsui et al., US 5,246,758, Onishi et al., JP 05-038878 and Shinkai et al., US 6,383,722. This rejection is respectfully traversed.

The Examiner refers to dyes D-17 and D-21 disclosed in JP'892. It should be noted that dyes D-17 and D-21 substantially absorb light with a wavelength of 632.8 nm or 803 nm because a He-Ne laser having an oscillation wavelength of 632.8 nm or an AlGaAs-GaAs laser having a oscillation wavelength is used to write information on optical recording media prepared with Dyes D-17 and D-21 in the examples disclosed at pages 21-22 of JP'892. In contrast thereto, the styryl dyes of claim 10 do not substantially absorb visible light with a wavelength of over 600 nm. Therefore, the styryl dyes claimed herein can be distinguished from dyes D017 and D-21 of JP'892.

Furthermore, dyes D-17 and D-21 of JP'892 have "I⁻" and "ClO₄⁻", respectively, as counter ions. The styryl dyes claimed herein has an azo metal complex as a counter ion. This is another distinguishing feature of the dyes claimed herein.

The Examiner indicates that Chapman discloses optical recording media which can be written on using a laser in the 400-660 nm range, and which have grooves with a depth of 30-270 nm, a width of 100-800 nm and a pitch of 0.5 to 1.8 microns. However, the dyes in Chapman are not styryl dyes but are cyanine dyes. Moreover, the absorption maximum of the cyanine dyes used in Chapman is 562 nm (please see column 3,

line 23), while the styryl dyes of claim 10 have an absorption maximum at a wavelength of 400 nm or less. In this regard, the optical recording media disclosed in Chapman are completely different from the optical recording medium defined in claim 10. Therefore, it is believed that Chapman teaches nothing about the claimed invention, and that Chapman adds nothing to JP'892, as the types of dyes are completely different.

Matsui adds nothing to JP'892 and Matsui because Matsui merely discloses that it is known in the optical recording media art to increase/improve the capacity of the recording media by reducing the distance between pits and the track pitch. Because the styryl dyes claimed herein are different from those disclosed in JP'892 and the optical recording media of Chapman, the disclosure of Matsui adds nothing to JP'892 and Chapman.

It should be noted that Matsui discloses columns having chemical structures recited at column 4, line 55 to column 5, line 14. Furthermore, it is clear from the absorption pattern recited in Figure 4 of Matsui that the compounds disclosed therein absorb light with a wavelength of more than 600 nm. Matsui discloses that information is written on optical recording media with a laser having an

oscillation wavelength of over 700 nm (please see Figure 3 and column 5, lines 15-21).

In contrast to this, the optical recording medium of claim 10 is capable of recording information using a laser beam with a wavelength of 450 nm or less, and the styryl dyes of claim 10 do not absorb visible light with a wavelength of over 600 nm. It is therefore respectfully submitted that the optical recording media disclosed in Matsui are completely different from that of claim 10, and that Matsui teaches nothing about the herein claimed invention.

While Onishi establishes that styryl dyes have an absorption centered at 425 nm, it should be noted that the optical recording medium prepared by using the Onishi compounds uses a laser having an oscillation wavelength of 488 nm to write information. In contrast thereto, the herein claimed styryl dyes have an absorption maximum at a wavelength of 400 nm or less, and the optical recording medium claimed herein uses a laser beam with a wavelength of 450 nm or less to write information. There is nothing in Onishi that suggests that the wavelength should be shortened and the recording density be increased.

Shinkai is said to teach the use of metallized dithiolate or azo dyes as quenchers and, more specifically, as counter ions to stabilize cyanine dyes. However, cyanine dyes

are not the same as styryl dyes. Furthermore, the optical recording medium disclosed in Shinkai uses a laser having an oscillation wavelength of 56345 nm to write information (please see column 6, lines 41-44).

There is nothing in Shinkai that would lead one skilled in the art to use counter ions useful for cyanine dyes in styryl dyes. The Shinkai optical recording medium is not at all the same as what is claimed herein. Therefore, it is respectfully submitted that one skilled in the art would not have been motivated to use an azo metal complex as disclosed in Shinkai in the herein claimed optical recording medium based upon styryl dyes.

Claims 10, 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 60-232995 in view of Chapman, Matsui and Onishi. This rejection is respectfully traversed.

JP'995 discloses styryl dyes, but these dyes do not require an azo metal complex as an indispensable compound. Moreover, the styryl dyes disclosed in JP'995 are those which absorb light having a wavelength of 600 nm or more because optical recording media comprising such styryl dyes use He-Ne laser with an oscillation wavelength of 830 nm to write information (please see page 32, lines 8-11). In contrast thereto, the styryl dyes of claim 10 do not absorb light with

a wavelength of over 600 nm, and the optical recording medium of claim 10 is capable of recording information using a laser beam with a wavelength of 450 nm or less.

It is respectfully submitted that the optical recording media disclosed in JP'995 is completely different from that of claim 10. Accordingly, neither Chapman, Matsui or Onishi adds to the disclosure of JP'995 to render the presently claimed invention obvious, as none of these disclosures relates to the particular type of dye claimed herein.

Claims 10, 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over either JP'892 or JP'995 in view of Chapman, Matsui and Onishi, further in view of Okusa et al., US 5,166,046. This rejection is respectfully traversed.

As noted above, neither JP'892 or JP'995 discloses or suggests the type of styryl dyes claimed herein. Okusa discloses compounds having as counter ions "I⁻", "ClO₄⁻" and "Br⁻". The styryl dyes claimed herein have an azo metal complex as a counter ion. Okusa teaches nothing about the optical recording media claimed in claim 10, which has a recording capacity exceeding 4.7 GB per one side of a disk with a diameter of 12 cm.

Since none of JP'892, JP'995, Chapman, Matsui or Onishi teaches or suggest the herein claimed invention, it is respectfully submitted that claims 10, 11 and 18 are patentable over these cited documents.

Claims 10, 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over either JP'892 or JP'995 in view of Chapman, Matsui, Onishi, Okusa and further inv view of Ootagura, US 5,318,882. This rejection is respectfully traversed.

The Examiner indicates that Ootagura discloses 4-N,N-dimethylamino-4'-dinitrosodiphenyl amine, and states that it would have been obvious to one skilled in the art to modify the recording media resulting from the combination of the cited art documents by adding the light stabilizing 4-N,N-dimethylamino-4'-dinitrosodiphenyl amine.

However, as noted above, none of the cited documents discloses or suggests an optical recording medium as recited in claim 10. It is therefore believed that modifying the recording media resulting from the combination of the cited prior art documents by adding the light stabilizing compound 4-N,N-dimethylamino-4'-dinitrosodiphenyl amine does not result in the optical recording medium claimed herein.

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In view of the above, it is respectfully submitted
that the claims are now in condition for allowance, and
favorable action thereon is earnestly solicited.

Respectfully submitted,

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